

Application Serial No.: 09/614,829

***Title: Heat Transfer Material Having Meltable Layers
Separated By a Release Coating Layer***

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REMARKS

With entry of this amendment, Claims 1-14 are pending. Claims 9 and 12-14 have been amended. Support for the amendments to the claims can be found on page 6, lines 1-20 and pages 16-18. No new matter has been added by these amendments.

35 U.S.C. §112, second paragraph

Claims 9 and 12-14 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 9 is rejected as being incomplete for omitting essential structural cooperative relationships of elements. Claim 9 has been amended to further define the structural relationships of the elements. The Examiner is requested to withdraw this rejection.

Claims 12-14 are rejected for containing limitations for which there is insufficient antecedent basis. Applicant has amended Claims 12-14 to provide sufficient antecedent basis. The Examiner is requested to withdraw this rejection.

35 U.S.C. §102(b)

Claims 1-5, and 9-14 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,670,448 (Kometani). Applicants traverse this rejection.

Kometani describes a recording sheet for making transparencies for use on projector units. (Column 1, lines 5-10) In making the transparencies, an opaque support sheet is laminated to the unrecorded surface of the transparent sheet in a releasable manner. (Column 1, lines 25-27). In the transparency-making recording sheet of Kometani, a thermoplastic resin layer is placed between the transparent substrate and the support sheet by an extrusion coating technique. (Column 2, lines 5-10). Kometani laminates the transparent substrate and the support sheet together by melting the thermoplastic resin. (Column 4, lines 50-60). Kometani does not describe a release coating. It describes an anchor coating. The anchor coating, as described, increases the adhesion between the extrusion coating and the film. Kometani also states that the adhesion force may become too great at relatively high temperatures. In contrast, in the present invention, the release coating enables the release of the top meltable layer from the release coating after heating to make the transfer. Without the release coating, the adhesive force would become very high and the two layers could fuse. Kometani states that the resin is allowed to develop "tack" by heat. (Column 5, lines 12-14.) In the present invention, the release coating layer has essentially no tack at transfer temperatures (Specification, page 9, lines 1-5). In Kometani, the anchor coating, when present, is applied to and remains on the thermoplastic film when the film is removed from the substrate. (Column 9, lines 35-37.) In the present invention, the release coating is applied to and remains on the first meltable layer (interior layer) so that it does not become part of the transferred image. Additionally, in the present invention, when there is a support sheet, the first meltable layer, or interior layer, and the release coating remain attached to the support sheet after the image is transferred. They do not transfer to the substrate as in Kometani. (Column 6, lines 40-43). For at least these reasons, Kometani does not disclose the present invention as currently claimed. The Examiner is requested to withdraw this rejection.

35 U.S.C. §102(b)

Claims 1-14 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application 5, 798,179 (Kronzer). Applicants traverse this rejection.

Krozner discloses a printable heat transfer material having cold release properties. It includes a base layer comprising a film or cellulosic nonwoven web; a second layer overlying the first surface of the first layer and including a thermoplastic polymer (the release layer) and a third layer which includes a thermoplastic polymer which melts. There is no description of a meltable layer interior to the release coating as described in the present invention. As stated in the specification, "the heat transfer material of the present invention comprises at least two meltable layers separated by a release coating layer." (Specification page 5, lines 21-23). While Krozner may contain a fifth layer which may include a film-forming binder which melts in a range of from about 65°C to about 180°C." (Column 8, lines 41-44), this layer is between the release coating and the meltable third layer. Krozner does not teach two meltable layers separated by a release coating layer, but a base layer covered by a release layer covered by one or two meltable layers. Layers three and five in Kozner, therefore, both transfer to the garment or other substrate when the transfer process is carried out and are not separated by the release layer as required in the present invention. The Examiner is requested to withdraw this rejection.

35 U.S.C. §103(a)

Claims 6-8 are rejected under 35 U.S.C. §103(a) as being anticipated by or obvious in view of Komentani. Applicants traverse this rejection.

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As stated above, the transfer material of Komentani does not teach or suggest the heat transfer material of the present invention. Additionally, the outer layer of Kometani is a transparent substrate, not a meltable coating outer layer. In the transfer material of Komentani, only the interior layer of the invention is meltable. The outer layer would not melt and transfer to a garment or other substrate. Komentani therefore does not disclose the present invention. The Examiner is requested to withdraw this rejection.

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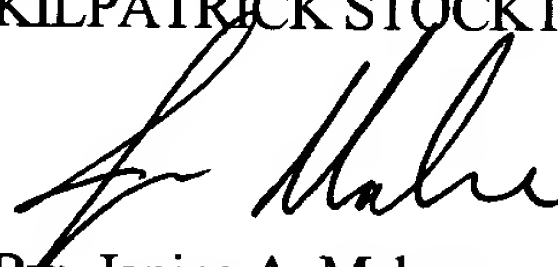
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Applicants respectfully submit that this is a complete response to the Office Action dated November 6, 2002 and that Claims 1-14 are patentable. Early and favorable consideration is earnestly solicited. If the Examiner believes there are other issues that can be resolved by telephone interview, or that there are any informalities remaining in the application which may be corrected by Examiner's Amendment, a telephone call to the undersigned attorney at (404) 815-6500 is respectfully solicited.

Respectfully submitted,

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MARKED COPY OF AMENDMENTS

Amendments to the Claims:

9. (Amended) The heat transfer material of Claim 1, further comprising one or more additional layers, wherein the one or more layers comprise a base substrate on a surface of the first meltable layer, a sub-coating layer on a surface of the releasable layer, a [top coating layer, a] top coating layer on a surface of the second meltable layer, or a combination thereof.

12. (Amended) The heat transfer material of Claim 10, wherein the second meltable layer [image-bearing coating] has a basis weight of less than about 40 gsm.

13. (Amended) The heat transfer material of Claim 12, wherein the second meltable layer [image-bearing coating] has a basis weight of less than about 30 gsm.

14. (Amended) The heat transfer material of Claim 13, wherein the second meltable layer [image-bearing coating] has a basis weight of less than about 20 gsm.